

Capacitor with Enhanced Performance and Method of Manufacture

ABSTRACT OF THE DISCLOSURE

A decoupling capacitor is formed in a semiconductor substrate that includes a strained silicon layer. A substantially flat bottom electrode is formed in a portion of the strained silicon layer and a capacitor dielectric overlying the bottom electrode. A substantially flat top electrode overlies said capacitor dielectric. The top electrode is connected to a first reference voltage line and the bottom electrode is connected to a second reference voltage line.